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## MONGOLIAN COOPERATION WITH USSR, CEMA MEMBER COUNTRIES

Moscow PLANOVVOYE KHOZYAYSTVO in Russian No 9, Sep 78 pp 45-52

/Article by Doctor of Economic Sciences P. Lubsandorj, corresponding member of the Mongolian Academy of Sciences: "The Process of Convergence of the MPR With the Soviet Union and Other CEMA Member Countries"

/Text/ The irreversible process of the economic convergence of the nations, peoples and countries in the two opposing systems of the modern world is taking place owing to the effect of the objective laws of the historical development of mankind. It is taking place only within the framework of production relations of a single type. Thus, it is taking place simultaneously and separately both under capitalism and under socialism and is a general objective law of social development under these two formations. As V. I. Lenin wrote, "the entire economic, political and spiritual life of mankind is being internationalized more and more under capitalism. Socialism will internationalize it completely."<sup>1</sup>

As a result of the formation of the world system of socialism this process on a worldwide scale has been accelerated. The point is that the internationalization of economic life is proceeding more rapidly in the socialist world than in the capitalist world, since socialism, "by organizing production /without/ /in italics/ class oppression, by providing prosperity to /all/ /in italics/ members of the state... facilitates and enormously accelerates the convergence and merging of nations."<sup>2</sup>

In the world socialist system the convergence of peoples in the economic field is closely connected with their convergence in other fields: in the sphere of politics, ideology and culture. Therefore the process of the convergence of the socialist countries is thorough, which promotes its rapid realization.

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1. V. I. Lenin, "Poln. sobr. soch." /Complete Collection of Works/, Vol 23, p 318.

2. V. I. Lenin, "Poln. sobr. soch.," Vol 30, p 21.

In the CC CPSU Accountability Report to the 25th Party Congress CC CPSU General Secretary L. I. Brezhnev noted that "along with the flourishing of each socialist nation and the consolidation of the sovereignty of the socialist states their interrelations are becoming closer and closer, more and more elements of similarity in their politics, economics and social life are arising, a gradual equalization of the levels of development is taking place. This process of the gradual convergence of the socialist countries is quite definitely manifested now as an objective law."<sup>3</sup> This question was clearly expressed also in the directive documents of recent congresses of the Communist and workers parties of the socialist countries.

The 17th MPRP Congress, which was an important stage in the realization of the program tasks of our party, elaborated a policy of the utmost convergence of the MPR with the Soviet Union and the other socialist countries. In the CC MPRP Accountability Report to the 17th Party Congress First Secretary of the CC MPRP Y. Tsedenbal indicated that "the immediate tasks and prospects of the further development of our country with great urgency are raising the need for the intensification of the process of the utmost convergence and consolidation of the MPR in the fields of economics, politics, culture and ideology with the fraternal socialist countries, first of all with the Soviet Union."<sup>4</sup>

The MPR's joining of the Council for Mutual Economic Assistance became a new stage in the economic cooperation of the MPR with the Soviet Union and other socialist countries and not only is of great importance for the development of its economy, but also is creating the real conditions for convergence with these countries, since the forms of economic cooperation are also forms of the economic convergence of the countries in the world socialist system. Among them are the conclusion and implementation of long-term trade agreements, agreements on the technical assistance of some countries to others in the construction of industrial and other enterprises, in the performance of geological surveys, on the joint construction of certain economic projects, and in a number of cases their joint operation, on scientific and technical cooperation, recommendations and agreements of the specialization and cooperation of production between individual countries, the coordination of national economic plans; the creation of sectorial interstate organizations and enterprises of the interested countries and so on.

The improvement of the enumerated forms of cooperation will serve not only as an effective means, but also an indicator of the convergence of the

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3. "Materialy XXV s"yezda KPSS" [Materials of the 25th CPSU Congress], Moscow, Politizdat, 1976, p 6.

4. "XVII s"yezd Mongol'skoy narodno-revolutsionnoy partii. Osnovnyye materialy i dokumenty" [The 17th Congress of the Mongolian People's Revolutionary Party. Main Materials and Documents], Moscow, 1977, p 83.

national economies of the socialist countries. Our country is using the most diverse forms of cooperation in various spheres, sectors and areas of the national economy. To some extent they concern all the aspects of socialist expanded reproduction--production, distribution, exchange and consumption.

The Soviet Union is constantly giving the Mongolian People's Republic disinterested fraternal assistance in the solution of major economic problems which arise when overcoming the former economic backwardness, creating and developing the socialist economy of the country. At the new stage of development of the fraternal cooperation of the MPR with the socialist countries, which began with its joining CEMA, along with the Soviet Union other CEMA member countries began to offer much assistance.

The Communist and workers parties and the governments of the CEMA member countries are showing enormous concern about the acceleration of the economic development of the MPR and the increase of the efficiency of its economy, which is attested by the special provisions of the Comprehensive Program of Socialist Economic Integration, which concern our country specifically.

As is indicated in the Comprehensive Program, the development of the optimum complex in the national economy of the Mongolian People's Republic requires considerable capital investments and the rendering of assistance on the part of the other CEMA member countries. In connection with this the Comprehensive Program stipulates a large number of measures, among which are the joint construction and operation of industrial and other projects by interested countries by means of sharing in the financial, material and technical means and manpower; the rendering of assistance in the development of the planned capacities and the achievement of the technical and economic indicators, which were stipulated by the corresponding plans, of the operation of the enterprises built with the assistance of CEMA member countries; the extension of various credits with special benefits and terms of repayment; the use in necessary instances of incentive foreign trade prices for the products of agriculture and the processing industry, the utmost assistance in the training of national skilled personnel and so on. These measures are being successfully implemented in the practice of the cooperation of our countries.

The technical and economic assistance, which the Soviet Union is giving our country, is steadily increasing. During the years of the Third Five-Year Plan (1961-1965) with the technical assistance of the Soviet Union Mongolian and Soviet construction organizations performed work on 90 projects of various sectors of the MPR national economy. Thus there arose a new socialist city--Darhan. During the years of the Third and Fourth Five-Year Plans there was created with the technical assistance of the Soviet Union the fuel and power complex of the Darhan Region, which includes an open-pit coal mine, a thermal electric power station, a high-voltage electric power transmission line, a wide-gauge railroad, a residential settlement with cultural

and everyday projects and a large number of industrial, municipal and other projects. The first power system in the MPR (the thermal electric power stations of Suhbaatar, Darhan and Ulan Baatar), as well as a new industrial region in the eastern part of the country were put into operation during the years of the Fourth Five-Year Plan (1966-1970).

During the Fifth Five-Year Plan (1971-1975) the Soviet Union gave enormous assistance in the development of numerous enterprises of agriculture, industry, transportation and communications, schools and hospitals. The building of the primary projects connected with the construction of the major Erdenet Industrial Complex was begun during these years.

The technical and economic assistance being given by the Soviet Union during the Sixth Five-Year Plan (1976-1980) will increase more than 2-fold as against the preceding five-year plan. More than 240 projects will be built, including 121 in agriculture, 63 in industry, 15 in transportation and communications, 25 in municipal and personal services and 14 in the area of science, culture and health. Among them are the large Erdenet Industrial Complex, the new fuel and power complex of the Central Region, agricultural enterprises of meat, dairy and vegetable specialization, as well as fodder enterprises and irrigation systems. Much technical and economic assistance will be given in the development of 230,000 hectares of virgin soil and in the construction of apartment houses with a floor space of 600,000 m<sup>2</sup>. Assets of the technical and economic assistance of the Soviet Union are about 70 percent of all the capital investments in the national economy of the MPR for this five-year plan. At present the industrial enterprises constructed with USSR technical and economic assistance produce more than 40 percent of the total gross production of MPR industry, including electric power--90 percent, coal mining--80 percent.

Thus, the great assistance of the Soviet Union extends to all the sectors of the national economy and culture of our country and is conducive to the acceleration of the economic development of the MPR, the increase of the efficiency of its economy and the further increase of the material and cultural standard of living of the Mongolian people.

Other CEMA member countries are also giving the MPR active assistance. The German Democratic Republic contributed to the construction of a printing office, a rug factory and a large meat combine in Ulan Baatar, participated in the modernization and expansion of the mining and concentration enterprise in Burentsogt. During this five-year plan the further expansion of the rug factory and the meat combine in Ulan Baatar will be carried out. The People's Republic of Bulgaria participated in the construction of a meat combine and a sheepskin factory and during the current five-year plan in the completion of the construction of an agro-industrial complex in Sharin Gol and a new brick plant.

With the technical and economic assistance of the Hungarian People's Republic a sewing factory, a biological combine and a meat combine were



built, technical assistance is being given in the irrigation of pastures. With the assistance of the Polish People's Republic plants of cellular concrete and silica brick, a woodworking combine and a plant for the production of meat and bone meal with a thermal electric power station were built, the woodworking combine in Ulan Baatar and the silica brick plant in Darhan will also be modernized.

The Socialist Republic of Romania took part in the construction of a circus in the capital of the country, and now is helping in the building of a combine for the production of furniture and other items made from wood.

The Czechoslovak Socialist Republic helped our country to build and modernize leather shoe enterprises, a cement plant and the central hospital, and during the Sixth Five-Year Plan with its assistance another shoe factory will be put into operation and the existing enterprises for the tanning of leather will be modernized.

In the MPR an international geological expedition was created by the joint efforts of the CEMA member countries for the performance of complicated geological research of its territory. These countries also use incentive foreign trade prices for livestock and meat, which are exported by the MPR, while the Soviet Union and the GDR twice have increased them. Moreover, the CEMA member countries are giving outright assistance in the building in the MPR of a center of scientific and technical information and a number of scientific research projects. A food store like the Universam has already been built and turned over for operation in Ulan Baatar, which is of great importance for the improvement of the service of the population of the capital.

The International Bank for Economic Cooperation and the International Investment Bank are granting credits to Mongolia on easy terms. Concessionary tariffs and rates are used in the communications between the MPR and other CEMA member countries for the payment for the hauling of foreign trade transit cargoes, as well as for the use of freight cars.

Many hundreds of our specialists and workers are undergoing a period of production probation and are improving their skills at enterprises and plants of the Soviet Union and the other CEMA member countries. At the same time a large number of specialists and skilled workers of the Soviet Union and other fraternal countries are working successfully in various sectors of the national economy of our country, imparting their rich experience and teaching our people production skills.

The main means of fruitful cooperation is the coordination of the national economic plans of our countries, in the course of which the key issues of the development of mutual cooperation are coordinated and jointly solved. The establishment of direct ties between related ministries and departments is being practiced more and more extensively, joint enterprises and economic associations for the development of the rich mineral resources in the MPR are being created and are operating successfully.

Good prospects of the accelerated growth of the economy of the MPR are being opened in connection with the drafting and implementation of long-term goal programs of cooperation (DTsPS's) of the CEMA member countries on the meeting of their increasing demands for fuel, electric power, raw materials, the basic types of food stuffs and industrial consumer goods, on the coordinated development of machine building and transportation ties. As was noted in the decisions of the 30th meeting of the CEMA Session, special measures aimed at the accelerated development and increase of the efficiency of the economy of the MPR will be included in these goal programs.

The implementation within the framework of the DTsPS's of measures on the use jointly with CEMA member countries of large deposits of coking coals, phosphorites, copper and molybdenum ore and other types of mineral raw material resources, on the efficient development of electric power engineering and transportation of the country will play the most important role in the acceleration of the development of the economy of the MPR and the equalization of the level of its economic development with the level of the other CEMA member countries. There is no doubt that this will promote the entry of the MPR onto the path of the building of communism more or less at the same time as the fraternal socialist countries.

Thus, the Soviet Union and the other socialist countries are giving comprehensive stepped-up assistance in the matter of the completion of the construction of the material and technical base of socialism in our country. On behalf of the flourishing of our country and the increase of the well-being of our people in the Mongolian People's Republic enormous international construction projects of socialism are proceeding, the representatives of the peoples of these countries are working, thereby on Mongolian land the great idea of proletarian internationalism is triumphing and is being materialized.

On the labor fronts, in the student auditoriums and school classrooms our current and future generations are learning from the brothers and sisters of the Soviet Union and other socialist countries their labor skills, outstanding progress and personal qualities: consciousness, discipline, responsibility and good organization. Our party, state, economic organs and institutions of science, culture and art also have direct ties with related organs and institutions of these countries, which is promoting the intensification of the process of the convergence of the MPR with the Soviet Union and the other fraternal socialist countries in the area of politics, ideology, economics and culture. Thus, this process now embraces all spheres of public life.

Y. Tsedenbal, first secretary of the CC MPRP and chairman of the MPR People's Great Hural, pointed out: "It is possible to become closer: in the level of development of the productive forces, above all in the per capita production of the products of agriculture and industry; in the per capita production of the national income; in the increase of the efficiency of

social production, consequently, in the increase of labor productivity as one of the main factors of the increase of production efficiency; in the development of culture, including in the level of education of the workers; in the level of the inculcation of socialist morals, in discipline, responsibility and in the level of the organization and quality of work; in planning, budget, financial and statistical accounting indicators."<sup>5</sup>

The maximum mobilization of internal resources and potentials is the main means of the convergence and equalization of the economic level of less developed countries to the level of more developed ones. The main internal factors, which influence the process of the convergence of the economic levels of the socialist countries, are the efficient use of working time, especially the use of the reserves of manpower, its shift to the sectors with a higher labor productivity and the increase of the level of skills; the change of the structure of the national economy by means of the implementation of socialist industrialization, the primary development of the most advanced sectors of the economy, as well as the creation of the optimum proportions in the sectorial structure of the national economy; the increase of the proportion of accumulation in the national income by means of the mobilization of all internal sources of accumulation and the increase of the amounts of internal capital investments. Moreover, the increase of the social labor productivity on the basis of the extensive introduction of advanced equipment and technology, the construction of enterprises of the optimum capacities, which provide a substantial reduction of the labor expenditures; the improvement of the methods of economic management on the basis of the more and more complete mastery of the effect of the objective economic laws of socialism. And, finally, the increase of the efficiency of capital investments, the use of natural resources and agricultural production.

At a certain stage the less developed countries have great potentials for the acceleration of economic growth by means of extensive factors. However, the more developed countries also develop quite rapidly. As a result, a relative, and not an absolute, convergence takes place between them. More or less equal conditions of the implementation of expanded reproduction will form for all these countries only with the creation in the less developed countries of the bases of a modern economy.

The process of the economic convergence of the countries within the socialist community is closely connected and interacts with the process of the equalization of their economic development. The overcoming of the substantial differences in the level of the productive forces of the individual socialist countries promotes the comprehensive and mutually advantageous convergence of their national economies.

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5. "Speech of Y. Tsedenbal, First Secretary of the CC MPRP and Chairman of the MPR People's Great Hural, Over Mongolian Radio and Television," UNEN, 4 November 1976.

The historical past of our country brought about its considerable lag economically behind the other fraternal socialist countries. In spite of the fact that the number of workers in industry and construction in the MPR is increasing, their proportion in the total number of those employed is approximately two times less than in the other countries. The proportion of those employed in agriculture with its considerable reduction exceeds by 2-3 times this indicator in the other countries.

Approximately the same picture can be seen in the comparison of the structure of the production of the national income. The proportion of industry and construction with its steady increase (from 21.6 percent in 1960 to 30.1 percent in 1975) in the produced national income of the MPR remains more than two times less as compared with the other CEMA member countries. The proportion of trade, material and technical supply and procurements, although tending to decrease steadily (from 44.2 percent in 1960 to 36.2 percent in 1975), all the same exceeds by 2-3 times the corresponding indicator in the other countries.

Socialist foreign trade, which is based on the principles of reciprocity, is promoting the industrialization of the less developed countries and thereby clearly demonstrates another objective advantage of the world socialist system over the capitalist system. Our country concluded the first trade agreement with the first socialist country in the world--the USSR--in 1923. In 1956 the MPR concluded the first trade agreements with the CSSR; in 1957--with Bulgaria, Hungary, the GDR, Poland, Romania, and in 1960--with the Republic of Cuba. The development of domestic industry, especially the mining, light and food sectors, led to some improvements in the commodity structure of the exports of the country. The proportion of the products of the ore mining industry increased from 0.1 percent in 1960 to 6.5 percent in 1975. Whereas in 1960 30 percent fell to the share of machinery, equipment and means of transportation in the imports of the country, in 1975 35.8 percent did, with a significant increase of the total volume of all imports. Moreover, machinery and equipment are being delivered in large quantity along the lines of credit deliveries.

The role and position of foreign trade and other forms of economic cooperation are especially increasing for a country with the relatively limited economic might, where the optimum complex of the national economy is still at the stage of formation and where the market has a small capacity, like the MPR.

In spite of the rapid rate of development of our entire economy, Mongolia still lags considerably behind the other CEMA member countries in the growth rate of the produced national income in general and especially on a per capita basis (see the table).

Our country is faced with a great task--not only to achieve today's level of development of the other socialist countries, but also to come up to them tomorrow. For this it needs to advance more rapidly than these countries. The

achievement of this great goal is possible only in the friendly family of peoples of the countries of the socialist community.

(1970 = 100 percent\*)

Country	1960		1975	
	for entire national economy	per capita	for entire national economy	per capita
Bulgaria	48	51	146	142
Hungary	59	61	136	133
GDR	65	65	130	132
Mongolia	77	101	138	120
Poland	56	61	159	152
Romania	44	49	171	163
USSR	50	57	132	126
CSSR	65	68	131	127

\*"Statisticheskiiy yezhegodnik stran-chlenov Soveta Ekonomicheskoy Vzaimopomoshchi 1977 g." /1977 Statistical Yearbook of the Member Countries of the Council for Mutual Economic Assistance/, Moscow, 1977, pp 40, 42.

Owing to the international assistance of the Soviet Union and other socialist countries the Mongolian People's Republic is successfully advancing along the path of the completion of the construction of the material and technical base of socialism and its current development already has its own trend and an international guarantee of convergence with the level of economic development of the other socialist countries to counterbalance the greatly increasing gap of the level of economic development between the developing and developed countries of the capitalist world.

The gradual overcoming of the historically established inequality in the levels of economic development of individual countries is one of the objective principles of the intensification of the international socialist division of labor. The division of labor among the socialist states should promote as much as possible the consolidation of national economic complexes and the expansion of production in the economically less developed countries. The faster increase of social production in these countries is promoting the gradual overcoming of the substantial differences in the overall level of the productive forces and, consequently, the increase of the participation of these countries in the international socialist division of labor.

The gradual convergence of the national economies of the countries in the world socialist system is a complicated, lengthy process which passes through various stages of development and is accomplished in diverse forms. At the basis of the production relations between the socialist countries is the public ownership of the sovereign socialist states. Interstate ownership, which has begun to be developed, will become one of the intermediate forms on the path to forming unified communist ownership in the future.

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BUDGET, STATE PLAN FOR 1978 DETAILED

Moscow FINANSY SSSR in Russian No 8, Aug 78 pp 91-96

/Article by MPR Minister of Finance T. Molom: "The State Budget of the Mongolian People's Republic"/

/Text/ The workers of our country, having extensively developed the socialist competition for the implementation of the historic decisions of the 17th MPRP Congress, a worthy greeting of the 60th anniversary of the Great October Socialist Revolution and the next election to the MPR People's Great Hural, for the fulfillment of the plan assignments of the national economy and social development in 1977, have achieved great labor successes. The material and technical base of production was expanded, the well-being and cultural standard of living of the people were increased.

The workers of the financial organs also made a notable contribution to the development of the economy and culture. The plan of the revenues of the 1977 state budget was fulfilled by 106.5 percent. In connection with this the conditions of the complete and uninterrupted financing of all the measures stipulated by the national economic plan and budget for 1977 were created, and opportunities were afforded to finance the additional assignments adopted during the year by the party and the government. By implementing the decree of the Politburo of the CC MPRP on the intensification of the economy drive and the discovery of internal reserves, enterprises and economic organizations received in 1977 more than 63 million tugriks of additional revenues.

The work being performed on the improvement of the management of the economy, the introduction of the new system of planning and economic stimulation is embracing more and more extensively the sectors of the economy of the country. Now more than 200 industrial enterprises and economic organizations, which represent all the sectors of the MPR national economy, are working according to the new system, their main economic indicators--the increase of labor productivity, the level of profitability, the output-capital ratio--exceed the average level.

The decisions adopted by the 17th MPRP Congress on the increase of the material well-being and cultural standard of living of the people are being successfully implemented. For these purposes the procurement prices for some products of livestock breeding were increased and markups on the procurement prices were used for several types of livestock breeding products of state farms and agricultural associations located in the Gobi zone. The wage of low-paid personnel working at state and public institutions at the centers of somons was increased, subsidies for working mothers were established with the receipt of additional leave to take care of the child until reaching six months of age. The rates for municipal and personal services were decreased. In 1977 about 20 million tugriks were allocated from the budget for these measures alone. At the same time the expenditures on sociocultural measures increased by 143.5 million tugriks, or 11.5 percent, as compared with 1976 and reached 1.4 billion tugriks.

At the 3d Plenum of the party CC (21 December 1977) First Secretary of the CC MPRP and Chairman of the Presidium of the MPR People's Great Hural Yu. Tsendenbal specified in detail and thoroughly the main directions of the building of socialism in our country and outlined specific ways and methods for the successful fulfillment of the plan and budget of 1978. He indicated the need to direct the attention of party, state and public organizations to the maximum mobilization and utilization of internal reserves, the improvement of the indicators of the national economy, the increase of the savings, the utmost increase of the sense of responsibility and discipline, especially devoting attention to the development of the initiative and activeness of all labor collectives and specialists.

In the national economic plan for 1978 it is contemplated to increase social production and to increase its efficiency as compared with 1977, to ensure a higher growth rate of social production than stipulated in the Sixth Five-Year Plan. In particular, it is proposed to increase the production of the gross national product by 6.6 percent. Such an increase will be provided by means of the increase of production efficiency and the productivity of national labor by not less than 3.4 percent. The year of 1978 is assuming decisive importance in the accomplishment of the tasks of the Sixth Five-Year Plan in the area of the increase of social production and its efficiency and will become a special year in the development of nationwide socialist competition and the creative labor of our people.

In the plan for 1978 there are stipulated an increase of the national income by 6.5 percent and an increase of the amount of savings in physical production by 12.9 percent, which will make it possible to increase the revenues of the budget by 10.5 percent. In formulating the MPR state budget for 1978 the goal was set to increase the savings of enterprises, to achieve the continuous improvement of the economic indicators of the national economy by means of the increase of the efficiency of social production, the complete mobilization and better utilization of internal reserves. The 1978 state budget was approved for revenues in the amount of 3.66 billion tugriks and expenditures in the amount of 3.65 billion tugriks. Of

its total amount 98.9 percent of the revenues will be received from state and cooperative enterprises and economic organizations.

In connection with the increase of the volume of the production and sale of industrial products and the foreign trade turnover, the revenues received by the budget in the form of the turnover tax and the difference of prices will increase as against last year by 13.2 percent. With allowance for the tasks of the better satisfaction of the demands of the national economy, specific assignments on the output of the main types of products in close coordination with the production capacities and material and raw material resources were stipulated and drafted in each ministry, production association and enterprise.

This year, on the basis of the assurance of the appropriate preparatory work, many enterprises will be converted to the new system of planning and economic stimulation. As a result, more than 60 percent of them will be working according to the new system, which will ensure the further consolidation of the principle of cost accounting.

Of the total amount, about 30 percent of the profit remains at the disposal of industrial enterprises and economic organizations, while the remainder is paid to the budget in the form of the fee for capital, fixed payments, the net surplus of the profit and profit withholding taxes.

The plan stipulates in industry to provide 82.7 percent of the increase of production by means of an increase of labor productivity and product quality through the introduction into production of advanced technology and highly productive equipment. Along with this it is planned to decrease the production cost of products by means of the better utilization and processing of raw materials and materials. As a result, industry will receive approximately 50 million turgiks of additional profit. In the fuel and power and light industry a more rapid growth rate of savings as compared with other sectors is planned.

The plan for 1978 provides for an increase of the savings of state agricultural enterprises by 69.7 percent and of the payments to the budget by 22.3 percent.

The party and government have taken a number of measures on the consolidation of the material and technical base and the increase of labor productivity in capital construction. This year a growth of the volume of construction and installation operations by 3.2 percent, an increase of the amount of the profit by 14.8 percent and of the payments to the budget by 16.5 percent are planned.

By means of the improvement of the technical and economic indicators of motor transport and the better utilization of trucks and trailers more than 60 percent of the increase of its revenues will be provided. In the organizations of motor transport the production cost of shipments will decrease



by 2.4 percent, the profit and savings of motor transport managements will increase by 14.8 percent. As a result of the concentration of telephone and telegraph lines and the increase of the number of communications points the volume of revenues of communications organizations as against last year will increase by 7 percent, while the amount of the profit will increase by 11 percent.

The increase of the production of industrial and agricultural products and foreign trade will make it possible to increase the volume and variety of the products entering the trade network, especially the sale to the public of food products, durable goods and cultural and domestic commodities. The plan provides for an increase of the retail commodity turnover and an increase of the number of service points of trade, procurement and supply organizations and consumer services. An increase of the foreign trade turnover by 2.6 percent is planned, while the payments to the budget from these sectors will increase by 13.5 percent.

In 1978 it is an urgent task to direct the attention and the initiative of the workers of agriculture and the engineering and technical staff to: the increase of the productivity of the head of livestock; the increase of the yield of agricultural crops; the improvement of the use and processing of raw materials and materials; the assurance of an increase of labor productivity; the increase of the economic efficiency and quality of the products being produced by industrial and agricultural enterprises.

The unfavorable climatic conditions of the past two years caused certain difficulties in the solution of the tasks set by the party for 1977. For the purpose of offsetting the harm caused to agriculture and the industrial enterprises and economic organizations connected with it, the financial organs of the MPR are faced with much work on the discovery and payment to the budget of additional revenues. An increase of the revenues by 10.6 percent is stipulated in the budget for 1978. They are being allocated for the further increase of the material well-being and cultural standard of living of the people, for the accelerated development of the sectors of physical production, for sociocultural measures and the elimination of the consequences of natural disasters.

This urgently requires of financial organs the taking of official measures aimed at: the improvement of the style and methods of their work; the fulfillment of the assignments by all enterprises and economic organizations by means of the enhancement of the mobilizing role of the plan, the use of economic levers; the maximum mobilization of the internal reserves of the economy. The intensification of financial control over the adherence by managers to the strictest policy of economy, the improvement of financial planning and the intensification of financial and credit levers are of exceptionally great importance in assuring the fulfillment of the plans of production and the increase of its efficiency and in improving product quality.

Among the measures aimed at the realization of the tasks set by the MPRP on the increase of the material well-being and cultural standard of living of the people, in 1978 the wage was raised for some low-paid categories of service personnel in state and public organizations of aymags and centers of population, chiefs and teachers of kindergartens, chiefs of somon clubs and libraries. Moreover, the salary rates of the workers of some communications specialities will increase, the amount of the pensions of invalids and individuals who have lost the bread-winners will be increased. More than 20 million tugriks are additionally being allocated from the budget for these purposes.

The expenditures on the financing of the national economy in 1978 will increase by 22.7 percent as against last year, 69 percent of which are being allocated for the construction of new industrial projects, the expansion and modernization of operating enterprises. Moreover, it is envisaged to allocate 31.4 million tugriks from the budget to cover the difference of the prices for children's clothing which is sold to the public at prices which do not reach the expenditures on its production. The assets being allocated for the construction, expansion, modernization and mechanization of enterprises should be used as the main factor of the increase of the economic indicators of economic organs.

The increasing demands of the national economy and the workers objectively requires the output of products of a new variety, better quality and finish by means of the assimilation in the shortest possible time of production capacities and the improvement of the production technology. The state is spending considerable assets on the modernization of enterprises, the introduction of new equipment and advanced technology, the improvement of the skills of workers, but, unfortunately, still the product quality is increasing insufficiently and the variety is not being expanded.

Of the assets being allocated for the financing of agriculture, 47.2 percent are being allocated for measures on the intensification of agricultural production, that is, on the further consolidation of the material and technical base of agriculture, the expansion of mechanization, the provision of livestock with warm housing, the irrigation of pastures. Some 278.9 million tugriks are being allocated for: the provision and replenishment with working capital of operating and newly created virgin soil state farms; the increase of the standard of the working capital of fodder enterprises and farms; the covering of the planned losses of some agricultural enterprises; measures on the control of the pests of pastures and weeds of sowing areas; expenditures connected with preventive veterinary measures and the delivery of fodders.

It is planned to increase the total amount of capital investments in the national economy by 16 percent, including by 11.2 percent by means of internal resources of the economy. Of the total amount of the capital investments 77 percent is being allocated for the development of physical production and the increase of its technical equipment, 21.2 percent is being

allocated for the construction of housing and projects for sociocultural purposes.

The increase of the proportion of the operations on the construction of major industrial and cultural projects, the installation of unique equipment and prefabricated structures at many projects located in different zones of the country very urgently requires the further improvement of the system of administration, planning, the organization of labor and material and technical supply of construction organizations, the optimum distribution and use of labor and material resources.

The assets for the financing of organizations of transportation and communications in 1978 primarily are being allocated for the consolidation of their material and technical base, the increase of the rolling stock and the expansion of the sphere of coverage of public transportation facilities, for the construction of roads and bridges. It is planned to increase the retail commodity turnover of trade and procurement organizations by 5.7 percent as against the plan of last year and to considerably expand the sphere of consumer services.

It is planned to allocate from the state budget through trade and procurement organizations 525.9 million tugriks for the financing of incentives for the fulfillment and overfulfillment of the plan of state procurements and the high fatness of procured livestock, for covering the difference in the prices for export deliveries. Being allocated to recover the planned losses of housing and municipal services are 33.8 million tugriks.

Reflected in the expenditure section of the state budget are the sources of financing, which are necessary for the realization of the tasks outlined by the plan of the development of the national economy and culture for 1978 on the improvement of the medical service of the population, the increase of the cultural, technical and general educational level of workers, the expansion of the service sphere and state social security and the increase of the monetary income of the population.

For the financing of sociocultural measures it is planned to allocate 1,536,300,000 tugriks, 96.3 percent of which are being allocated from the budget, which exceeds by 4 percent the level of last year. From the assets for sociocultural measures 45.5 percent are being allocated for people's education, 20.9 percent for health, 8.4 percent for culture, art, physical culture and science, 25.2 percent for state social security and social insurance.

It is planned to increase the expenditures of scientific research institutions and the number of scientific staff members. The material base of scientific research institutes, scientific research and pilot experimental centers and laboratories of the Academy of Sciences and the ministries will be consolidated. In 1978 such important projects as a united laboratory of the food industry, a laboratory of the wool industry and a chemical technology production shop will be put into operation.

In conformity with the tasks set by the party and government on the expansion of the sphere of state social security the expenditures for these purposes will increase by 20.5 percent. In addition to the assets of the budget and internal expenditures, the plan provides for the allocation for sociocultural measures of 37.3 million tugriks at the expense of the amounts left at the disposal of enterprises and organizations.

On the basis of consistent adherence to the principle of the decrease of the cost of the administrative apparatus and the reduction of management expenses, the expenditures on management in 1978 are planned at the level of 1977.

In 1978, the decisive third year of the Sixth Five-Year Plan, the financial organs of the country should place monitoring and economic work on the level of the requirements of today and thereby should ensure not only the fulfillment, but also a considerable overfulfillment of the 1978 budget.

By implementing the decisions of the CC MPRP Plenum, the workers of the MPR successfully fulfilled the plan of national economic development of the first quarter of 1978. The workers of agriculture worked well, 8.5 million young animals are being raised--slightly more than 1 million more than during the corresponding period of last year. The state farms and agricultural associations of the country successfully completed the spring sowing work. More than 360 buildings for livestock with a total capacity of more than 175,000 head were put into operation.

MPR industry coped in the first quarter with the set tasks. The increase of the gross production as against the corresponding period of last year was about 9 percent. Especially good indicators were achieved by the construction materials industry, which increased the production of the gross production by 25.4 percent. The volume of construction and installation operations increased by 23.9 percent. The plan of the increase of labor productivity was overfulfilled by 13.3 percent.

Many enterprises of MPR industry overfulfilled the quarterly plan. Among them are the Mongolsovtsvetmet Association, the Yeron and Hyalgant logging managements, the Ulan Baatar Motor Vehicle Repair Plant, the meat combine and many others. The retail commodity turnover increased by 6.9 percent, while the MPR foreign trade turnover increased by 12.7 percent.

The gains achieved in the national economy favorably affected the fulfillment of the budget. The plan of revenues of the first quarter of 1978 was fulfilled by 100.8 percent, and the republic budget was fulfilled by 101.3 percent. There were especially successfully fulfilled: the plan of the turnover tax--101.4 percent, the fee for capital--104.8 percent, the plan on other revenues--144.8 percent. The successful fulfillment of the plan of revenues ensured the continuous financing of all the measures stipulated by the national economic plan and the budget.

This year MPR foreign economic ties, the economic, scientific and technical cooperation with the Soviet Union and other fraternal countries of the socialist community will undergo further development. Measures on the further expansion and development of the material and technical base of agriculture, industry, construction, transportation and communications and on the comprehensive construction of housing, municipal and everyday objects are being implemented in 1978 with the directly assistance of the Soviet Union. In 1978 operations on the expansion, modernization and construction of more than 20 industrial and agricultural projects will be performed with the technical and economic assistance of the CEMA member countries.

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## MPR BUDGET FIGURES FOR 1970-1975 REPORTED

Moscow FINANSY SSSR in Russian No 11, Nov 77 pp 84-87

/Article by Candidate of Economic Sciences D. Lubsantseren: "The State Budget of the Mongolian People's Republic"

/Text/ The MPR is successfully solving the socio-economic tasks on the completion of the construction of the material and technical base of socialism. The experience of the republic is of great practical and theoretical importance, since not in a single socialist country was the initial level of the building of the new life so low as in Mongolia. Besides land and livestock in the country there were no major means of production, which could be converted into public property so as to rely on it in developing the economy and to create the basis of socialist production relations. Yu. Tsedenbal wrote: "...The 1921 budget of the new Mongolia is 1 million tugriks, the institutional yurtas and small structures are the material base, on the basis of which it was necessary to begin the construction of the new economy."<sup>1</sup>

Historical experience has confirmed the realisticness of Lenin's idea of the possibility of building with the support of socialist states of socialism in economically backward countries, bypassing capitalism. Comrade L. I. Brezhnev in a speech at the solemn meeting devoted to the 50th anniversary of the 3d MPRP Congress said: "Your 50 years of experience are a major achievement of revolutionary thought and action. Precisely here, on our land... the idea of V. I. Lenin of the conversion to socialism, bypassing capitalism, has been embodied in reality. In this lies the enormous contribution of Mongolian communists and the Mongolian people to the process of world social development."<sup>2</sup>

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1. Yu. Tsedenbal, "Izbrannyye stat'i i rechi" /Selected Articles and Speeches/, Vol II, Moscow, Politizdat, 1962, p 128.

2. L. I. Brezhnev, "Leninskim kursom. Rechi i stat'i" /By the Leninist Course. Speeches and Articles/, Vol 5, p 202.

The economic and cultural backwardness of old Mongolia brought about the peculiarity of the ways, periods and methods of solving the problems of building socialism. V. I. Lenin believed that the economically backward countries will arrive at socialism not immediately after the victory of the revolution, but through specific stages of the revolutionary transformation of precapitalistic production relations. In this matter an important role belongs to the state, which concentrates in its hands commanding economic heights. Therefore, the entire process of transformation in the MPR began with the creation of a unified financial and credit system and the establishment using it of control in the national economy on the part of the state. Without this it was impossible to ensure the independence of the country, economic and cultural development.

In the formation and development of the socialist economy the financial system of the republic and the state budget, as the most important tool of popular power, played an exceptionally important role. Here various tasks faced them at different stages of the forward movement.

The total victory of socialist production relations in the MPR at the beginning of the 1960's had a beneficial influence on all spheres of social life. The central economic problem of the current period of development, as is indicated in the MPRP program, is "the completion of the creation in the optimum complex of the material and technical base of socialism by means of the further industrialization of the country.... The party is setting itself the goal of transforming the MPR in the immediate future into an industrial agrarian country...."<sup>3</sup>

The MPRP is specifying not only the tasks of the development of the country, but also the ways of solving them, specific methods of achieving the set goals. Thus, under present conditions questions of the utmost increase of the efficiency of social production, the economy of national labor and the persistent mastery of the economic methods of socialist management are being placed in the forefront. In connection with this the use of economic levers of influence on production efficiency, particularly financial levers, is acquiring a special significance.

In the accountability report of the CC MPRP at the 17th party congress Yu. Tsedenbal said: "The tasks of the utmost consolidation of cost accounting as a tried method of socialist management, the principles of the more complete utilization of such economic levers as the price, profit, finances, credit and others remain very urgent.... In the matter of... increasing production efficiency and improving quality... the improvement of financial planning and the intensification of financial and credit levers... are of exceptionally great importance."<sup>4</sup>

3. "XV s"yezd MNRP" /The 15th MPRP Congress/, Moscow, Politizdat, 1966, p 177.

4. Yu. Tsedenbal, "Otchetnyy doklad TsK MNRP na XVII s"yezde MNRP" /CC MPRP Accountability Report at the 17th MPRP Congress/, Ulan Baatar, 1976, pp 59-60 (in Mongolian).

The MPR financial system began to be created in the 1930's, when there arose for the first time in Mongolia industrial and other state cooperative enterprises and organizations, which carried out economic activity on the basis of cost accounting. Now it consists of statewide finances and the finances of the sectors of the national economy. In turn the statewide finances are divided into the state budget, state social insurance, state property and personal insurance and state credit, while the finances of the sectors of the national economy consist of the finances of state and cooperative (the finances of agricultural associations) enterprises and organizations.

An organizing, coordinating role belongs to the MPR state budget, as the central link of the financial system. It is of a strictly planned nature, is integrally interconnected with the entire set of financial plans and is distinguished by soundness and stability. The growth of the state budget of the republic reflects the dynamism of the national economy, the increasing efficiency of social production. In the MPR during the Fifth Five-Year Plan (1971-1975) the gross national product increased by 44.5 percent, while the national income increased by 38 percent. The social labor productivity increased by 23.5 percent, by means of which 70 percent of the increase of the national income for the five-year plan was provided.

The state budget unites the republic budget and the local budgets--the aymag budgets and those of individual cities which are of statewide importance, as well as the budget of state social insurance.

The total amount of the budget of the country for 1977 is 3,312,000,000 tugriks, including the republic budget--2,087,600,000 tugriks and the local budgets--1,224,400,000 tugriks.

It is possible to judge the changes of the amount and structure of the budget from the following data:

Table 1  
(in percent)

(1) Доходы	(2) Годы					
	1970	1971	1972	1973	1974	1975
(3) Государственного бюджета:	100	100	114	136	144	140
(4) республиканского бюджета	100	100	104	113	119	117
(5) удельный вес	73,2	68,3	67,7	66,2	63,3	60,7
(6) местных бюджетов	100	120	130	151	181	202
(5) удельный вес	26,8	31,7	32,3	33,8	36,7	39,3
(7) в том числе:						
(8) аймачных бюджетов	100	115	124	144	164	181
(5) удельный вес	77,1	73,3	73,3	73,2	69,6	69,0
(9) городских бюджетов	100	140	150	174	240	274
(5) удельный вес	22,9	26,7	26,7	26,8	30,4	31,0

/Key on following page/



Key:

- |                    |                  |
|--------------------|------------------|
| 1. Revenues        | 6. Local budgets |
| 2. Years           | 7. Including     |
| 3. State budget    | 8. Aymag budgets |
| 4. Republic budget | 9. City budgets  |
| 5. Proportion      |                  |

During the past five-year plan the revenues of the republic budget increased by 17 percent, those of local budgets increased twofold. The proportion of the republic budget decreased by 12.5 points, while that of the local budgets increased correspondingly. Their amount increased during the five-year plan 2.3-fold and reached 1,076,600,000 tugriks, which attests to the rapid development of the local economy, which was accompanied by the emergence of new administrative economic regions and cities.

The MPR is faced with a complicated task--to complete the construction of the material and technical base of socialism and to create the optimum national economic complex. In connection with this the role of the budget in the distribution and redistribution of the national income and the furthering of its increase is increasing more and more. Therefore the growth rate of the amount of the state budget of the country is higher than the national income, which attests to the intensification of the concentration of a portion of the national income at the disposal of the state.

The receipts from the socialist sector in the form of the turnover tax and the payments from the profit of enterprises and organizations are the main source of budget revenues. This two-channel system of the mobilization in the budget of a part of the net income of society was introduced at the beginning of the 1960's (Table 2).

Table 2

Indices of the Increase of the National Income and the Amount of the State Budget of the MPR\*

(1970 = 100 percent)

	Years							
	1960	1965	1970	1971	1972	1973	1974	1975
National income	77	81	100	106	110	122	129	138
State budget	54	78	100	109	114	136	138	142

\* "Statisticheskii yezhegodnik stran-chlenov SEV" /Statistical Yearbook of the CEMA Member Countries/, 1975 and 1976, Moscow, "Statistika".

As is evident from the cited data, the payments to the budget from socialist enterprises and organizations increase absolutely and relatively, while those from the population decrease. Consequently, the state is reducing

the sphere of the redistribution of the monetary income of the population through the budget and, relying on the accelerated growth of the economic potential of the country, is utilizing more and more extensively the increasing savings of the economy for its further development and utmost intensification, as well as for the steady increase of the standard of living of the population. At the same time the role of the budget in expanded socialist reproduction is governed not only by the accumulation of monetary assets in it, but also by their use.

The expenditures of the MPR state budget are of a strictly goal nature and are made in conformity with the national economic plan of the republic. They have been increasing from year to year on the basis of the increase of revenues. According to the functional purpose it is possible to divide them into two groups: the expenditures on the expansion of the sphere of physical production and the expenditures being allocated for the maintenance and development of the nonproductive sphere (Table 3).

Table 3

Composition and Structure of Revenues of MPR State Budget  
(in millions of tugriks and percent)

	(a) Годы							
	1970	1971	1972	1973	1974	1975	1976*	1977*
(b) Сумма доходов	1971	2088	2257	2678	2844	2753	2987	3312
(c) 1. Доходы от социалистического хозяйства	1923	2042	2213	2642	2806	2717	2949	3272
(d) удельный вес	97,6	97,8	98,1	98,7	98,7	98,7	98,7	98,8
(e) налог с оборота	1442	1397	1502	1746	1762	1801	1977	2288
(d) удельный вес	71,6	66,9	66,6	65,2	62,0	65,4	66,2	69,0
(f) платежи из прибыли	358	493	547	726	849	742	750	752
(d) удельный вес	18,2	23,6	24,2	27,1	29,8	27,0	25,1	22,7
(g) отчисления в фонд социального страхования	78	83	87	93	99	102	125	130
(d) удельный вес	4,0	4,0	3,9	3,5	3,5	3,7	4,2	4,0
(h) прочие доходы	75	69	76	77	96	74	97	102
(d) удельный вес	3,8	3,3	3,4	2,9	3,4	2,7	3,2	3,1
(i) 2. Доходы от населения	48	46	44	35	38	36	38	40
(d) удельный вес	2,4	2,2	1,9	1,3	1,3	1,3	1,3	1,2

Key:

- |                                   |   |
|-----------------------------------|---|
| a. Years                          | f. Payments from the profit             |
| b. Total of revenues              | g. Deductions for social insurance fund |
| c. Revenues from socialist sector | h. Other expenditures                   |
| d. Proportion                     | i. Revenues from the population         |
| e. Turnover tax                   |   |

\* According to the plan.

In the past seven years considerable changes have occurred in the correlation of the expenditures of the budget on the national economy and socio-cultural measure (by proportion) in favor of the latter. These changes in

the structure of the expenditures attest to the improvement of the organization of cost accounting at enterprises and associations, the favorable results of the introduction of the new system of planning and economic stimulation, which increased the possibilities of the self-financing of enterprises. This makes it possible to increase the expenditures of the budget on sociocultural measures.

Table 4

Composition and Structure of Expenditures of MPR State Budget  
(in millions of tugriks and percent)

	(1) Годы							
	1970	1971	1972	1973	1974	1975	1976*	1977*
(2) Сумма расходов	1910	2082	2165	2530	2670	2683	2972	3300
(3) в том числе:								
(4) на народное хозяйство	892	919	936	1202	1211	990	1134	1208
(5) удельный вес	46,7	44,1	43,2	47,5	45,4	36,9	38,2	39,3
(6) на социально-культурные нужды	747	853	895	952	1045	1202	1282	1423
(5) удельный вес	39,1	41,0	41,4	37,6	39,1	44,8	43,1	43,1
(7) прочие расходы	271	310	334	376	414	491	556	579
(5) удельный вес	14,2	14,9	15,4	14,9	15,5	18,3	18,7	17,6

Key:

- |                            |                           |
|----------------------------|---------------------------|
| 1. Years                   | 5. Proportion             |
| 2. Amount of expenditures  | 6. On sociocultural needs |
| 3. Including               | 7. Other expenditures     |
| 4. On the national economy |                           |

\* According to the plan.

At present 120 enterprises and associations are operating according to the new system of planning and economic stimulation, the conversion to which began in 1968; 160 enterprises are performing the corresponding experiments.

As is known, the economic reform in the MPR was drawn up and implemented with allowance for the experience of its conducting in the USSR and other CEMA member countries. At the same time it is distinguished by a number of peculiarities, particularly in the sphere of the interrelations of enterprises and associations with the budget. One of them consists in the fact that the experimental introduction of the new system of planning and economic stimulation was begun at enterprises of light and the food industries, as the most profitable enterprises in the country.

Further. The limitation of labor resources predetermined the situation in which the enterprises and associations operating under the new conditions are obligated to pay not only for fixed production capital and working capital for which standard rates are laid down, but also for the wage fund. These payments in a uniform amount (6 percent) of the actually issued wage are established for all enterprises and associations (except those of trade

and public dining), so that they would utilize manpower more efficiently, would carry out the overall mechanization of production processes more rapidly and would introduce the latest achievements of science and technology more extensively.

Under the conditions of the economy reform the new types of payments of enterprises and associations to the budget, namely: the fee for productive capital and the wage fund, fixed and rent payments, contributions of the net surplus of the profit, are acquiring greater and greater importance. As a result the influence of the budget on production is being intensified, its links with the national economy are being developed. This, in particular, is expressed in the considerable increase of the payments from the profit with a reduction of the proportion of the turnover tax in the budget revenues. The proportion of the payments from the profit in the budget revenues in 1965 was only 14.8 percent, while in 1970-1975 it increased from 18.2 percent to 27 percent. Here the proportion of the turnover tax in 1970-1975 decreased from 71.6 percent to 65.4 percent. The slight increase of the proportion of the turnover tax and the corresponding decrease of the proportion of the payments from the profit after 1975 were caused by the change at the end of 1974 of the wholesale prices in the national economy.

The economic reform still has not been completed. In 1976-1980 it is planned mainly to complete the transition to the new system of planning and economic stimulation of all cost accounting enterprises and organizations.

Among the tasks advanced by the 17th MPRP Congress for the current five-year plan a special place belongs to the utmost increase of the efficiency of social production, the improvement of the quality of work in all spheres and links of the national economy. In connection with this the role of financial levers of influence on production is increasing. The improvement of the interrelations of the budget with the national economy is one of the directions of the intensification of such influence. The system of the distribution of the monetary savings of the economy and the formation of the budget revenues should promote not only an increase of the payments to the centralized funds of the financial resources of the country, but also the more complete mobilization of the internal economic reserves and the potentials of the economy as a whole.

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## DEVELOPMENT OF MONGOLIAN AGRICULTURE DISCUSSED

Moscow MEZHDUNARODNYY SEL'SKOKHOZYAYSTVENNYY ZHURNAL in Russian No 6, 1977  
pp 4-7

/Article by B. Chultem, chief of the department of consolidated planning of the MPR Ministry of Agriculture: "Great October and the Development of the Socialist Agriculture of the MPR"/

/Text/ Along with the Soviet people all progressive mankind of the world is solemnly marking the 60th anniversary of Great October as a great holiday of the outstanding victories of socialism and communism, as the triumph of the ideas of Marxism-Leninism and proletarian internationalism. This memorable date is being widely celebrated in the Mongolian People's Republic. The invaluable importance of Great October consists in the fact that in a comparatively short segment of time Mongolia in close union with the homeland of October has successfully overcome the difficult legacy of the colonial-feudal past, has completed the historical leap from feudalism to socialism and has been transformed into a socialist country with a developing economy and a flourishing culture.

On the eve of the Mongolian revolution V. I. Lenin wrote that "We will exert every effort in order to converge and merge with Mongolians, Persians, Indians, Egyptians.... We will try to give these peoples, who are more backward and oppressed than we are, 'disinterested cultural aid...', that is, to help them to convert to the use of machinery, to the facilitation of labor, to democracy, to socialism."\* One of the specific examples of the embodiment of Lenin's noteworthy plans is the economic, scientific and technical cooperation of the USSR and the MPR in all sectors of the national economy, including agriculture--that vitally important sector of the economy of the country.

During the first years of the establishment of popular power the Mongolian People's Revolutionary Party took the course of the creation and development of socialist production relations, having put forth as the primary task

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\* V. I. Lenin, "Soch." /Works/, 5th edition, Vol 30, p 120.

of the economic development of the state the task of the radical reorganization of agriculture.

Relying on the experience of the socialist transformation of USSR agriculture, the first state farms: the Zuunhara, Jargalant and Tsagan-Tolgoy, were organized in the country on the basis of the confiscated property of the feudal lords. The creation of the first state farms marked the emergence of the socialist sector in the economy of the country. The enormous importance of the creation of new socialist production relations in agriculture consisted in the fact that they received their start under the conditions of the feudal-serfdom system and marked the revolutionary change of the centuries-old conditions of agricultural production, the entire life and psychology of the simple arat.

The creation of the state farms served as a graphic example of the advantages of large-scale socialist production over the individual arat farms.

The elimination of the age-old backwardness of agriculture and its conversion of the path of intensification began in 1937, when in 7 aymags there were organized 10 horse and haying stations supplied with equipment of Soviet make, which was given as a gift to the Mongolian people. At that time Mongolia received 50 tractors, 55 horse-drawn hay mowers, 325 horse rakes, 25 balers, as well as trucks, mobile workshops and other equipment. The creation of the horse and haying stations had a substantial influence on the development of agricultural production. They played an invaluable role in the training of national machine operating personnel. With the aid of Soviet specialists in 1938-1939 187 tractor drivers, 118 drivers, 77 brigade leaders, 87 record keepers and bookkeepers, 61 fitters and 31 assistant mechanics were trained.

Later the horse and haying stations were transformed into state farms and machine and livestock breeding stations, which were supplied with new equipment.

In the 1940's and 1950's the party policy was aimed at the assurance of the triumph in agriculture of socialist production relations. The conversion of the individual arat farms at the end to the 1950's to the path of socialist cooperation marked a profound change in the economy and the class structure of society, which led to the elimination of the exploitation of man by man and to the eradication of the causes giving rise to class antagonism in society. During this period credits of the Soviet Union, the amount of which in 1960 as against 1941 had increased 13-fold, played an exceptionally great role in the creation of the material and technical base of agriculture. This made it possible to create in Mongolia large-scale socialist agricultural enterprises.

Agricultural associations (SKhO's) are the main organizational form of these enterprises in the country. At present there are 258 SKhO's in the country. Along with them 56 state farms, including 12 fodder farms, have been created in the country. The SKhO's have mainly a livestock breeding

direction. More than 74 percent of the number of livestock of the country is concentrated at them. On the average there are about 65,000 head of livestock at each agricultural association. The annual income of an SKhO on the average is about 2.5 million tugriks.

The state farms are large-scale mechanized socialist farming enterprises. To them belongs 66 percent of the sown area of the country. Each state farm has on the average approximately 30,000 head of livestock, 15,000 hectares of sown area, nearly 200 tractors (converted to 15-hp tractors), 40 grain combines. The value of the fixed capital per state farm is 30 million tugriks, including about 26.0 million tugriks for agricultural purposes. The value of the annual gross production of a state farm on the average is estimated at 7 million tugriks.

The large-scale socialist farms in practice have demonstrated their advantages over small, individual farms. The creation of large-scale socialist farms made it possible to successfully develop farming. About 30 percent of the production of agriculture now falls to it. Owing to the successful development of virgin lands, which was begun in 1959 with the assistance of the Soviet Union, farming has become a second important sector of the socialist agriculture of the country. This made it possible to meet the demands of the country for flour by means of domestic grain farming.

More than 90 percent of the agricultural lands of the country have been drawn into agricultural production, while the number of people engaged in it is 46 percent of the total number of workers in the national economy.

The proportion of the products of agriculture in the exports of the country is about 50 percent, while together with the products of light industry, which are produced from agricultural raw materials, it is 80 percent.

The MPRP and the MPR Government are performing enormous work on the material and technical supply of agriculture.

The achievements of modern science and technology are being widely introduced in agricultural production. Scientists of three institutes, experimental stations and strain testing sections, the development of which are finding greater and greater application in agricultural practice, are conducting scientific research in the country.

During the past three five-year plans the power-worker ratio of agriculture increased 9.4-fold, the tractor fleet increased 11-fold, the combine fleet increased 6-fold. The tasks advanced by the 16th MPRP Congress on the development of agricultural production during the Fifth Five-Year Plan have basically been fulfilled. During the past five-year plan (1971-1975) MPR agricultural production was developed at a more accelerated rate.

The productive forces are increasing, socialist production relations in agriculture are being intensified and improved. During the Fifth Five-Year

Plan the average annual volume of the gross production of agricultural products increased by more than 26 percent as against the preceding five-year plan. The sown area was enlarged by 12 percent, the yield of the main crops increased, the production of fodders increased twofold. Agriculture of the country received during the years of the five-year plan 4,500 tractors, about 1,500 grain harvesting combines, more than 3,000 trucks and specialized motor vehicles and much other equipment. During the past five-year plan 14.5 million hectares of pastures were irrigated, hashans for 7.3 million head of livestock were built, which considerably consolidated the material and technical base of livestock breeding.

The plan of the production of the main product of farming--grain--was fulfilled by 104.5 percent. In 1973 and 1975 alone respectively 32.2 and 33.5 million poods of grain were harvested. The yield of grain crops increased by 43.3 percent as against the preceding five-year plan.

In five years more than 3,300 specialists with a higher and secondary education and more than 10,000 skilled workers were trained and sent to agriculture. More than 45,000 boys and girls were transferred to work in agriculture according to travel orders of the Revolutionary Youth League. The economy of SKhO's and state farms is being consolidated, the material, cultural and everyday conditions of the agricultural workers are being improved. Thus at SKhO's and state farms the monetary income during the five-year plan increased by 33.3-49.4 percent, while the proportion of the income distributed from the public sector among the members of the SKhO's increased by 25.7 percent.

The triumph of socialism has radically changed the appearance of the village. Large-scale modern central farmsteads of SKhO's and state farms have been created on the boundless expanses, where earlier one could only encounter lama monasteries. At these farmsteads there are electric lighting, radio-telephone communications with the aymags, general educational schools, libraries, hospitals, stores, clubs and children's nurseries.

With each year the material well-being of the rural workers is increasing. The wage of cattle breeders is increasing. The members of the SKhO's are provided pensions and subsidies for old age, as well as in case of temporary disability. Now the majority of the workers of state farms and the members of SKhO's have radios. Each family of livestock breeders subscribes on the average to three periodicals.

The production and social activity of the arat has acquired a new, socialist content. At present highly skilled specialists of various profiles manage agricultural production. About 90 percent of the directors of state farms and secretaries of the party committees of state farms, 60 percent of the chairmen of SKhO's and 40 percent of the secretaries of the party committees and cells have a higher education. On the average there are 6-8 specialists with a higher education and 15-18 specialists with a secondary education for each state farm. Veterinarians, zootechnicians, economists,



engineers and agronomists, who have a higher education, as well as many specialists with a secondary education, are working at each SKhO. More than half of the livestock breeders have received an elementary or secondary education. During 1957-1977 the number of machine operators increased nearly 10-fold. Moreover about 60 percent of them have a secondary education.

In ascribing particular importance to the development of agricultural production, the 17th MPRP Congress advanced a new, far-reaching program of the further steady development of socialist agriculture.

New great tasks face agriculture of the country in 1976-1980. It is planned to increase the average annual production volume of agricultural products as against the Fifth Five-Year Plan by 26-30 percent.

The production of the main products of livestock breeding will increase during the Sixth Five-Year Plan as against the preceding five-year plan in the following amounts: meat by 20-24 percent, milk by 26-30 percent, wool by 6.5-9 percent, eggs 2.5- to 3-fold.

Important problems have to be solved during the current five-year plan in farming. The CC MPRP Plenum held in January 1976 discussed and adopted the decree, "On the Development of Virgin Lands and the Increase of the Production of the Products of Farming." The plenum advanced as the most important task of the party and the people the development in 1976-1980 of 230,000 hectares of virgin lands by means of the organization of new state farms and the expansion of plowing at existing state farms and agricultural associations. The development of virgin lands will be combined with the intensification of livestock breeding by means of the development of fine-wooled and semifine-wooled sheep breeding, dairy cattle breeding and by means of the organization of cattle fattening.

In order to fulfill the outlined program of the development of the virgin land 11 state farms have been built, including 5 state farms by the forces and at the expense of the Soviet Union and 6 state farms by the forces of Mongolian construction organizations with the technical assistance of the Soviet Union. All these farms will be fitted with modern equipment, which Soviet organizations will supply.

By means of the enlargement of the sown area and the increase of the yield of agricultural crops the average annual gross output of grain will reach 500,000-530,000 tons, potatoes--60,000-65,000 tons, vegetables--40,000-45,000, ensilage crops--140,000-146,000 tons, which correspondingly is 47.4 percent, 23.6 percent, 68.7 percent and 4.2-fold greater than the average annual indicators of the Fifth Five-Year Plan.

Of decisive importance in the development of livestock breeding is the consolidation of its material and technical base. For this purpose it is planned to construct and place into operation 5 livestock breeding farms,

15 mechanized dairy farms, each with 400 cows, and to irrigate an additional 12 million hectares of pastures. On the average in a year it is planned to procure 850,000-870,000 tons of fodder units or 53.1 percent more than during the preceding five-year plan.

The material and technical base in farming will also be considerably consolidated. It is proposed to enlarge the capacities for the storage of grain, potatoes and vegetables. The construction of irrigation systems in the arid regions of the western and Gobi aymags will be continued, which will make it possible to increase by 1980 the total area of irrigated lands 2.5- to 2.7-fold as compared with 1975. During the Sixth Five-Year Plan up to 7,500 tractors, more than 2,000 grain harvesting combines, 1,600 trucks and much other equipment will be supplied to agriculture.

In recent years a qualitative updating of the machine and tractor fleet has been taking place. Now DT-75, DT-75M and MTZ-80 tractors are working in the fields of the country, and starting in 1976 powerful and high-speed K-700 and T-150K tractors with a set of diverse agricultural machinery began to be received. The updating of the fleet of trucks, combines and other equipment is taking place.

These measures will make it possible basically to complete the overall mechanization of grain production, to increase considerably the level of mechanization of the cultivation and harvesting of potatoes, vegetables and other agricultural crops, as well as the procurement of fodders. During the new five-year plan it is planned to allocate capital investments in the amount of 2.3 billion tugriks for the consolidation of the material and technical base of agriculture, which will be 16.4 percent of the total amount of the capital investments in the national economy.

During the Sixth Five-Year Plan the principle of the establishment of fixed plans of the purchases of agricultural products for a number of years and measures of the economic stimulation of farms for above-plan sales are being maintained. For the purposes of further consolidating the economy of SKhO's and state farms in 1976 the purchase prices for some types of live-stock breeding products were raised, and some incentive measures were also taken for the further development of the agricultural associations of the Gobi Zone.

During the Sixth Five-Year Plan the conversion of state farms and other agricultural enterprises to complete cost accounting will be completed.

In order to fulfill the tasks of the Sixth Five-Year Plan the agricultural workers adopted socialist obligations. Moreover, 70 percent of the agricultural workers adopted higher obligations, the fulfillment of which will make it possible to additionally obtain products worth more than 350.0 million tugriks.

The gains achieved in the development of socialist agriculture are inseparably connected with the comprehensive fraternal assistance of the Soviet

Union and other socialist countries. During the years of economic cooperation 78 agricultural projects have been built and placed into operation in Mongolia with the assistance of the USSR, including 9 large-scale complex farms of grain and livestock breeding specialization, 3 stations for the cultivation of fodder crops and the procurement of fodders, 16 mixed fodder plants and shops, 3 seed-cleaning points, 5 veterinary bacteriological laboratories, 13 machine repair workshops, 10 mechanized threshing floors, 4 dairy farms for 400 cows each, which then were provided with highly productive cattle, and other projects.

With the technical assistance of the USSR more than 300,000 hectares of virgin lands were developed, more than 35,000 livestock barns and about 13,400 watering places were built, irrigation systems were introduced on an area of 2,600 hectares.

The construction of these projects considerably expanded and consolidated the state sector of MPR agriculture and increased the production of agricultural products. More than 34.8 percent of the fixed capital and about 27.5 percent of the gross production fall to them. These farms provide 35 percent of the meat, 59.8 percent of the milk, 29.3 percent of the wool and 31.5 percent of the grain produced in the state sector.

The official friendly visit of a party and government delegation of the MPR to the Soviet Union in October 1976, during which there were signed a number of joint documents which provide for the further expansion and intensification of comprehensive Mongolian-Soviet cooperation, was an event of great historical significance. In the documents signed during the visit it was stated that the economic aid being given by the USSR to Mongolia during 1976-1980 will increase more than twofold as against the preceding five-year plan. This aid will serve as the determining factor in the fulfillment of the historic tasks advanced by the 17th MPRP Congress in the matter of the progress of Mongolia along the path of the creation of the material and technical base of socialism, the acceleration of the development of the productive forces and the further increase of the well-being of the Mongolian people.

"People's Mongolia, which has stepped in its time onto socialist virgin soil from feudalism," L. I. Brezhnev states, "is now solving a task of enormous historical and political importance. In completing the creation of the material and technical base of socialism, it is trying to achieve the equalization of the level of its development with the level of the other socialist countries. And we are giving and will give assistance to our Mongolian brothers in the implementation of their plans."\*

During the years of the current five-year plan large-scale specialized farms for the production of grain, vegetables and livestock breeding products will be built in Mongolia with USSR assistance. Among them are

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\* PRAVDA, 19 October 1976.

the Ulan-Tolgoy State Farm, which is called upon to provide the region of Erdenet with milk and vegetables, the Undurhan Sheep Breeding State Farm, the Tumentsogt Meat Farm, the Sumber Karakul Breeding Farm and other projects, and measures on the development of virgin and fallow lands, the construction and modernization of irrigation systems, livestock barns and watering places will also be implemented.

Agriculture of the country is confidently following the course outlined by the 17th MPRP Congress. During the first two years of the new five-year plan serious harm was done to this sector due to unfavorable weather conditions. In the past such natural phenomena led to ruin of tens of thousands of small individual farms. At present, owing to the advantages of the large-scale socialist farm, the measures taken by the party and the government, as well as the assistance of the Soviet Union, the difficulties were overcome.

The MPRP and the Mongolian Government have taken a number of measures which will make it possible in the shortest time to eliminate the harm done to livestock breeding and to successfully solve the tasks set by the 17th MPRP Congress on the development of agriculture.

The far-reaching socio-economic transformations being accomplished in the agriculture of the country, as well as the prospects of its further development became possible owing to the disinterested aid of the socialist countries and above all of the Soviet Union.

The workers of Mongolian agriculture, like all the people, are greeting the glorious celebration of the 60th anniversary of the Great October Socialist Revolution with new achievements in the matter of implementing the decisions of the 17th MPRP Congress.

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INTERNATIONAL COOPERATION IN DEVELOPMENT OF MONGOLIAN AGRICULTURE

Moscow MEZHDUNARODNYY SEL'SKOKHOZYAYSTVENNYY ZHURNAL in Russian No 1, 1978  
pp 9-12

/Article by D. Dugar, corresponding member of the MPR Academy of Sciences, scientific staff member of the International Institute of Economic Problems of the World Socialist System: "International Cooperation Is an Important Factor of the Development of Mongolian Agriculture"/

/Text/ Agriculture is one of the main sectors of the economy of Mongolia. In it more than 50 percent of the workers engaged in the national economy work, one-fourth of the national income and one-fifth of the gross national product are created in it. The products of livestock breeding constitute up to three-fourths of the exports of the country.

On the basis of the program tasks of the Mongolian People's Revolutionary Party, the decisions of the 16th and 17th congresses and the subsequent plena of the CC MPRP, with allowance for the rapidly increasing demands of the population for foodstuffs and of industry for raw materials, much work is being performed on the further development of the agriculture of the republic.

The Sixth Five-Year Plan of the National Economic Development of Mongolia for 1976-1980 provides for an increase of the average annual production volume of agricultural products as compared with the preceding five-year plan by 26-30 percent, the average annual production of meat by 20-24 percent, milk--by 26-30 percent and eggs--2.5 to 3-fold.

As a result of the development of virgin lands and the increase of the yield of agricultural crops it is planned to increase the average annual output of grain to 500,000-530,000 tons, potatoes--60,000-65,000 tons and vegetables--40,000-45,000 tons.

During the new five-year plan the amount of capital investments in agriculture will increased by 31 percent as compared with the preceding period.

Considerable assets will be allocated for the consolidation of the fodder base, the irrigation of pastures, the construction of livestock barns, the improvement of veterinary service and the increase of the technical equipment of agricultural enterprises. In particular, it is stipulated to increase the average annual production of fodders to 850,000-870,000 tons of fodder units, to increase the production of mixed fodders and fodder mixes and to increase their quality, as well as to continue the construction of small irrigation systems in arid regions. It is planned to irrigate 12 million hectares of pasture lands and construct a large number of livestock barns.

Much work will be performed on the consolidation of the material and technical base of farming, which includes the construction of production structures, the increase of the fleet of tractors, combines and other agricultural machinery and equipment, the use of mineral fertilizers, the development of seed growing, the construction of storehouses for grain, potatoes and so on. During 1976-1980 it is contemplated to create a number of virgin soil state farms and farms for the production of fodders.

In solving the great tasks outlined by the 17th Congress of the Mongolian People's Revolutionary Party in the area of agriculture, the workers of the countryside, as before, will rely on the ever strengthening friendship and intensifying socialist economic integration among the countries of the socialist community. Thus, during the coordination of the national economic plans between Mongolia and the USSR for 1976-1980 an understanding was reached on the comprehensive development during these years in Mongolia, with the technical and economic assistance of the Soviet Union, of 230,000 hectares of virgin lands and the creation of a number of virgin soil state farms and livestock breeding farms. As the result of the development of the virgin lands Mongolia will considerably increase the production of grain, fodders and correspondingly the products of livestock breeding.

With the technical and economic assistance of the CEMA member countries it is planned to create specialized farms and farms of dairy and meat livestock breeding and sheep breeding, vegetable and milk farms, agro-industrial and hog raising complexes, to carry out the modernization of poultry factories, the construction of new and the modernization of existing irrigation systems and irrigation structures, mixed fodder plants and shops, to make a soil-geobotanical and erosion study of the agricultural lands. In particular, with the technical assistance of Bulgaria an agro-industrial complex is being created in Orhon-Sharyngol. Hungary will assist in the construction of the Herlen-Bayan-Ulaan irrigation system, the GDR will assist in the expansion and modernization of the state farm in Bornur of Tob Aymag.

The agrarian policy of the MPRP is based on the creative application of the principles developed by V. I. Lenin of the creation and improvement of socialist production relations in agriculture, on the use of the rich experience of the Communist and workers parties of the fraternal countries on the implementation of Lenin's cooperative plan.

The successful cooperation of small livestock farms and the creation of the socialist system of agriculture were the most important factors and the socio-economic prerequisite for the solution of the problems of the intensification of agricultural production. A typical feature of the consolidation of the material and technical base of the socialist agriculture of Mongolia is the fact that the process of socialist industrialization is taking place in the country at the same time. At the same time the consolidation of the world socialist system and the further intensification of socialist economic integration, the sharing of know-how among the fraternal countries, the wealthy experience and comprehensive assistance of the Soviet Union are the most important factors in the solution of the complicated problems of the development of the material and technical base of the agricultural production of Mongolia at the present time.

The assistance of the Soviet Union, the homeland of October, the 60th anniversary of which all progressive mankind celebrated in 1977, and which successfully implemented Lenin's cooperative plan, is of particular importance. The disinterested assistance has great traditions, which have their beginning in the victory of the popular revolution in Mongolia.

The party and government of the country have implemented major organizational and economic measures on the stable growth of agricultural production, the consolidation of socialist production relations and the further development of the productive forces of agriculture.

The provision of state farms and agricultural associations (SKhO's) with manpower, especially skilled personnel of various specialties, and the planned training of the replacement of the old generation of workers of the countryside from among the young people are a subject of particular concern of the party and state, as was indicated in the documents of the 17th MPRP Congress. As a result of the taken effective measures, the efflux of manpower from agriculture to other sectors has ceased. In recent years agricultural production has been reinforced according to plan with a large number of boys and girls who have graduated from general educational secondary schools. Agricultural higher educational institutes and tekhnikums of the country annually train a large number of specialists--veterinarians, zoo-technicians, agronomists, economists and engineering and technical personnel. Owing to this now agricultural enterprises have skilled personnel who are able to carry out agricultural production on a scientific basis, with the use of advanced technology and advanced know-how.

The SKhO's and state farms of Mongolia have become major producers and suppliers of the products of livestock breeding and farming. Today on the average there are 452,000 hectares of farm land and 69,000 head of public livestock per association. On the average there are 11,000 hectares of sown area and 36,000 head of livestock per livestock breeding and farming state farm.

One of the typical features of the process of the consolidation of the material and technical base of agriculture in Mongolia is the rapid increase

of the amount of capital investments and the increase of its fixed production capital. The state is allocating according to plan to agriculture considerable capital investments and is supplying it in an ever increasing amount with tractors, agricultural machinery and equipment. In the past 15 years from one-fifth to one-third of all the capital investments of the country have been channeled into agriculture. During the Fifth Five-Year Plan 1.4 times more assets were allocated for the consolidation of the material and technical base of this sector than during the preceding five-year plan, while the amount of capital investments in livestock breeding during the same period increased threefold. During 1960-1975 the fixed production capital of the agriculture of the country increased 2.9-fold.

State capital investments were allocated above all for the consolidation of the fodder base of livestock breeding, the irrigation of pastures, the construction of livestock barns, the creation of new farms, the increase of the technical equipment of agricultural enterprises and the consolidation of the scientific educational and pilot experimental base of agriculture. During 1971-1975 7,000 wells were built in the country. At present more than half of the pastures are irrigated. During the years of the Fifth Five-Year Plan alone more than 14 million hectares of pastures were irrigated, 3 large and 44 small irrigation systems were built. In 10 years 30,000 livestock barns, a considerable portion of which are supplied with water and are heated (for the rearing of young animals at them), have been built.

The production of fodders by the industrial method is being organized in order to create a firm fodder base. Mixed fodder plants and shops are being constructed, mechanized fodder procurement farms and specialized motor transport enterprises for the long-distance hauling of fodders are being set up. Owing to this during the Fifth Five-Year Plan the production of fodders doubled.

Significant results have been achieved in the mechanization and electrification of agriculture. The main types of operations in field-crop cultivation and fodder production have been completely mechanized. During the Fifth Five-Year Plan agriculture received 4,500 tractors, 1,500 combines, more than 3,000 trucks and much other equipment. Owing to the assistance given by the Soviet Union in the area of the mechanization and electrification of agriculture, in the past 15 years the consumption of electric power in agriculture has increased 20-fold, while at present 160 hectares of sown area fall to each tractor (converted to 15 hp), that is, according to this indicator Mongolia has achieved the average indicator for the CEMA member countries.

Large-scale specialized farms of meat specialization are being set up by the forces of the Soviet Union in the region of Halhin-Gol and Orhon-Tul. A number of specialized farms have been organized: the Zunharaa, for the production of milk, potatoes and vegetables; the pure-bred sheep breeding farm in Erentsab; the dairy farms of the Bayantsogt State Farm. In recent years



tens of farms for the production of fodders and mixed fodder plants with a total capacity of 130,000 tons of fodders a year and other projects have been built and put into operation with the assistance of the USSR.

The CEMA member countries are giving extensive aid and support to Mongolia in the control of the disease of animals by the sending of specialists, the organization of the production of some veterinary medicines, the supply of the necessary equipment for the outfitting of diagnostic offices and veterinary laboratories. The joint veterinary expedition of specialists of Bulgaria, Hungary, Poland, the USSR, Czechoslovakia and Mongolia has done much useful work on the improvement of the health of animals in the country. Long-range plans of measures on controlling certain infectious diseases have been drafted. This made it possible to considerably reduce cattle plague from infectious diseases. With the technical and economic assistance of Hungary a large biological combine has been built in Songino. Poland has delivered a complete set of equipment for 90 diagnostic offices of aymag veterinary laboratories.

The Orhon-Sharyn Gol Vegetable State Farm, a hog fattening farm and hot-houses for the growing of vegetables in the suburbs of Ulan Baatar have been built with the assistance of Bulgaria. Hungary is supplying drilling equipment and tools for geological prospecting and is sending skilled specialists who are carrying out the search for underground water by the methods of geophysical prospecting. The GDR is giving much assistance, supplying equipment and apparatus for scientific research institutes of livestock breeding, plant growing and farming, the Institute of Fodders and Pastures, the Ulan Baatar Agricultural Institute, and is also carrying out the expansion and modernization of the State Farm imeni E. Teliman in Bornur.

Veterinary bacteriological laboratories, diagnostic offices, veterinary stations, medical fodder points and others are also being supplied according to plan with the latest technology, laboratory equipment, apparatus and instruments with the assistance of the CEMA member countries.

One of the main methods of joint fruitful activity of the CEMA member countries and the main means of development of the international socialist division of labor is the coordination of the national economic plans of the fraternal countries, which is being successfully carried out on both a bilateral and a multilateral basis. At present the coordination of the plans on the agriculture of the countries of the community has become more comprehensive and modern and is making it possible to seek out new reserves of the development of this important sector.

The implementation of the comprehensive program and the coordination of plans are conducive to the acceleration of the intensification of the agricultural production of Mongolia, its most proper specialization, the joint elaboration of scientific and production problems, the introduction of industrial methods of the production and processing of some types of livestock breeding products, the increase of the rate of development and the efficiency of agricultural production as a whole.

In order to accomplish these tasks, specialists of Mongolia jointly with specialists of the CEMA member countries have drafted the "Program of the Intensification and the Introduction of Industrial Methods of the Production of Some Types of Livestock Breeding Products in Mongolia," "Recommendations on a System of the Management of Livestock Breeding and Fodder Production in Mongolia" and so on. The CEMA member countries are participating in the fulfillment of these programs on the basis of the coordination of plans and the conclusion of bilateral and multilateral agreements. On the basis of a reached agreement, the USSR is assisting Mongolia in the increase of the technical level of agricultural production, particularly in the elaboration and implementation of measures on the increase of the production of fodders, the improvement of their use, the improvement of production technology (especially in dairy production), breeding work in livestock breeding, the introduction in production of the achievements of science and advanced know-how.

The program of the intensification of the agriculture of Mongolia provides for the solution of such important problems as the increase of the production of fodders, the improvement of the use of fodder means in livestock breeding. It is planned to accomplish the increase of the fodder resources of the country by means of the increase of the yield of natural and the enlargement of the areas of cultivated haymaking, the intensification of field fodder production and the development of the mixed fodder industry, the sharp increase of the reserve stocks of fodders. Beef cattle husbandry, sheep raising and other sectors will under go further development on the basis of these measures. Moreover, the development in the optimum amount of industrial poultry raising, hog raising and dairy cattle breeding around large centers of population and industrial centers is envisaged. The indicated recommendations and considerations, which were elaborated by specialists of the CEMA member countries, were at the basis of the long-range plans of the development of the agriculture of the country and the intensification of the cooperation of the MPR with the other countries.

Highly productive pure-bred animals, which are being received according to planned reciprocal deliveries from the USSR and the other CEMA member countries, are having a great influence on the increase of the productivity of local livestock. In 12 years Mongolia has purchased in the Soviet Union more than 10,000 rams of the Stavropol', Tsigay and Altay breeds for the improvement of the wool qualities of local sheep. During the same period in conformity with an agreement the Soviet Union has supplied Mongolia with 5,000 head of cattle and 400 goats.

A domestic breeding base is being created in the country, which in the future will be the basis of the quality improvement of the breeds of agricultural animals.

New breeds and types of animals and agricultural crops, which have better qualities and are more adapted to the local natural climatic and soil conditions, have been bred and are being created. For example, scientists and

practical workers have bred the Orhon semifine-wool breed of sheep and the Hangay fine-wool breed of sheep. The fine-wool sheep, which were obtained by the crossing of the Mongolian local breed of sheep with the Altay and Stavropol' breeds, yield on the average per year 5-6 kg of high quality wool. The work at the Yeron Sheep Breeding Farm on the breeding of semifine-wool sheep for meat and wool is being successfully completed.

The crossing of local beef cattle with the sires of the Sychevo breed (USSR) is being carried out in the country. Crossbreeds of three generations have been obtained, their productivity and other economic qualities under the conditions of pasture keeping have been studied. Work is being carried out on the improvement of the meat qualities of livestock by means of the crossing of cows of the local Mongolian breed with the sires of the Kazakh white-headed breed, work is also being carried out on the creation of a new breed of meat and fat hogs, the main forms for which are the Siberian northern and the local breeds. These achievements are the result of the joint efforts of Soviet and Mongolian scientists and specialists.

Since 1970 work has been carried out in the country on strain testing for the purpose of using under the conditions of our country the strains of grain crops and potatoes, which are cultivated in the CEMA countries.

The participation of Mongolia in international strain testing serves as the start of national seed growing and the selection of agricultural crops, the introduction into production of a number of new strains which are adapted to local soil and climatic conditions.

In various strain testing sections, where the testing of 84 strains of grain crops, potatoes and vegetables received from the CEMA member countries is being carried out, 17 strains have been selected and regionalized in different regions of the country; 95 percent of the sown areas of the country are now planted with the best strains of the selection of the USSR. The cultivation of the Soviet high yielding strains of spring wheat Saratovskaya 29, Lyutetsens 758 and others is affording farmers of Mongolia an opportunity to annually harvest an additional amount of grain with high milling qualities.

The determination of the causes of the emergence of wind erosion is being carried out. About two-fifths of the area of the farming zone have been studied. Using the experience of the All-Union Institute of Grain Growing, the scientists and specialists of Mongolia have studied the surface and basic methods of working soils and the application of fertilizers on eroded chestnut soils. As a result of the studies the standard demand for anti-erosion equipment was elaborated and recommendations were prepared on the use of a set of machinery for controlling wind erosion. The established and organized service on the quarantine and protection of plants and the extensive utilization of the know-how of the CEMA member countries in this area enabled Mongolia to carry out the effective control of rodents, weeds, diseases and pests of agricultural crops and pasture plants.

Mongolia is participating in the work of five coordinating centers for the elaboration of the scientific and technical problems of agriculture. In particular, the scientific research institutes of Mongolia are actively participating in the program of research of the Coordinating Center on the Problem "The Mechanization, Electrification and Automation of Production Processes in Plant Growing and Livestock Breeding." The development of a general plan of unified systems of units for mobile power means is an important results of the work of this center.

Relying on the increased economic, scientific and technical potential of the country and the ever intensifying process of socialist economic integration among the countries of the socialist community, the rural workers, like all the Mongolian people, are now working fruitfully on the successful fulfillment of the tasks set by the 17th Congress of the Mongolian People's Revolutionary Party in the area of agricultural production.

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ROLE, RESULTS OF SCIENTIFIC RESEARCH IN AGRICULTURE DETAILED

Moscow MEZHDUNARODNYI SEL'SKOKHOZYAYSTVENNYI ZHURNAL in Russian No 1, 1978  
pp 16-20

/Article by Candidate of Agricultural Sciences B. Pureb, deputy minister of agriculture and chairman of the MPR Council of Agricultural Science: "The Current Status and Tasks of the Further Development of Agricultural Science in the MPR"

/Text The role of science in the development of the national economy is enormous. Science has now become an immediate productive force.

As a result of the measures implemented by the Mongolian People's Revolutionary Party and the MPR Government the material base of agricultural institutions is being consolidated, the number of skilled scientific personnel is increasing, the sphere of scientific research is being expanded and its efficiency is increasing.

At present 12 agricultural scientific research institutions are operating in Mongolia, including 3 institutes, 4 comprehensive and 5 sectorial stations, which have 366 scientific staff members and 275 auxiliary personnel. Moreover, 17 agricultural experimental production stations and 5 of their branches are in operation, the duty of which is the introduction of the achievements of science, technology and advanced know-how in agricultural production.

The scientific research institutions of agriculture have 43 sectors and 33 laboratories.

In recent years the external ties of the institutions of the country have been expanded, cooperation has been established with 10 scientific institutions of the Soviet Union and the GDR. Our scientific research institutes and stations are taking a direct part along the line of CEMA in the work of six coordinating centers, two councils on science and technology and one international collective of scientists.

These contacts are of great importance for the increase of the theoretical and methodological level of scientific research and for the reduction of the term of its performance.

The agricultural scientific research institutions are conducting joint research on individual questions with the institutes of physics and technology, mathematics, economic and botany, the planning and surveying institute of water management, a joint Mongolian-Soviet biological expedition and other scientific organizations of the country.

Some Results of Scientific Research. At present the scientific research in the area of livestock breeding is focused mainly on the solution of the vital questions of the intensification of this sector, the increase of production and the improvement of livestock breeding products.

During the research scientifically sound methods of selection and breeding work on the raising of various types of livestock are being elaborated and breeds and breed groups of livestock of higher productivity are being developed. Questions of the increase of the fertility of animals, the intensification of the growth and development of the young animal are also being elaborated, assistance is being given in the area of the introduction of efficient technologies of the production of the main types of products of livestock breeding.

Good results have been achieved in the performance of scientific production work on the provision of domestic rug enterprises with high quality raw materials. Today the number of pure-bred Chaamar sheep, which yield such raw materials, is 31,000, while that of crossbreeds is more than 290,000 head. On the average 2 kg of semicoarse fleece are obtained from one pure-bred sheep, while 1.7 kg of higher quality fleece are obtained from the crossbreed. In the past six years more than 2,700 pure-bred sire rams have been raised and turned over to farms.

As a result of the work on the development of a breeding base of fine-wooled sheep in the Hangay Zone there is now a larger number of fine-wooled sheep, which attests to the possibility of creating a domestic breed group of fine-wooled sheep.

Scientific research aimed at the development of a herd of semifine-wooled sheep in the eastern steppe zone and of early maturing crossbred semifine-wooled sheep of the meat and wool type in the forest-steppe zone is being carried out successfully. Now the number of semifine-wooled sheep with an average wool yield of 2.3 kg has reached in Asgat Somon of Suhbaatar Aymag 8,000 head, of semifine-wooled Tsigay sheep and their crossbreeds at the Undurhan State Farm of Hentiy Aymag--22,000 head, and of early maturing crossbred sheep of the meat and wool type at the Yeroo State Farm of Selenge Aymag--8,000 head.

During the Fifth Five-Year Plan the Gobi Gurban Sayhan breed of goats for nap was developed. More than 70 agricultural associations of 9 aymags of

the Gobi Zone and Gornyy Altay are engaged in the raising of goats of this breed. The number of such pure-bred goats with crossbreeds has reached 135,000. The goats of the new breed yield twice as much nap as local goats. In the past six years 1,500 sire goats of this breed have been raised and turned over to the agricultural associations of the Gobi Zone.

An effective technology of the intensive fattening of lambs and young bulls has been developed for the purpose of increasing the production of beef and mutton. As a result of the introduction of this technology into production at the Hudulmur Agricultural Association of Altanbulak Somon of Tob Aymag in 1976 the production of mutton increased 2.2-fold, while the monetary income from sheep raising increased 2.9-fold as against 1970.

In 1976 at the Bayangol Fattening Farm of the Scientific Research Institute of Livestock Breeding an experiment on the intensive fattening of young bulls was successfully conducted.

The introduction of a scientifically substantiated advanced technology of the production of eggs and poultry meat at the Songino Poultry Factory made it possible to obtain in 1976 205 eggs from each laying hen, while in 1970 only 120 eggs were obtained. The productivity of laying hens increased by 70.8 percent, the safekeeping of chicks increased by 5-7 percent, the production cost of products decreased sharply.

A considerable share of the scientific research work in the area of livestock breeding is aimed at the increase of the number of head and the improvement of the productive qualities of the best offspring of local livestock, at the improvement of the standards of the products of livestock breeding and the improvement of the technologies of the production of such products as milk, dairy products and kumiss.

The scientific reseach in the area of veterinary science is aimed at the improvement of the quality of the vaccines and biologicals, which are used against some infectious animal diseases, at the study of the causes of the plague of young animals, the barrenness and infertility of dams, at the elaboration of preventive measures against noncontagious diseases, as well as the curing of agricultural animals of parasitic diseases. The resources of domestic medicinal plants are being studied for the purpose of their use for the production of the medicinal compounds used in veterinary science.

The morphological and biological properties of the pathogens of some infection diseases have been studied, diagnostic compounds, preventive and treatment sera and vaccines for their control have been developed and are being introduced in production. The types of the pathogen of enterotoxemia have been determined, 33 pure cultures have been isolated, strains for the production of a vaccine have been selected. A concentrated vaccine, a preventive treatment serum and a diagnostic type specific serum have been produced, instructions and the standard for their production, monitoring and use have

been developed and turned over to production. Senior scientific staff member L. Dashdabaa, the author of this work, was awarded the MPR State Prize in 1976.

The biological features, strain composition and geographic range of pathogens and the epizootology of some helminthases, protozoan and arachnid-insect diseases have been studied; effective measures to control these diseases have been developed and are being introduced in production.

In the main regions of the country the epizootology of the hypodermatosis of cattle, the ecology of the pathogens of hypodermia and their biological properties have been studied, the economic harm caused by this disease has been determined and effective measures of controlling it have been worked out. Since 1972 the anti-hypodermatosis treatment of all cattle has been carried out with the technical and economic assistance of the GDR, as a result of which in 1976 89 percent of the cattle had been cured of hypodermatosis.

On the basis of the study of the causes of plague of young animals antibiotics have been determined, which it is necessary to use with various diseases of young animals, the technologies of the production of such albuminous biologicals as gamma globulin, aminopeptide, plasma and others have been developed and are being introduced.

The conducted experiments on the use of the blood serum of brood mares yielded good results on the increase of the impregnability and fertility of dams. The technical and economic substantiation of the creation of a shop for the production of the blood serum of brood mares was elaborated on the basis of these experiments. It was determined that under our condition the activity of the sex hormones in the blood serum of brood mares during the period of 65-120 days after mating exceeds 200 mouse units.

In six aymags of the country 60 genres, 111 species and 1,002 strains of the mycelium of pathogenic fungi have been detected in the soil, grain and fodders and their virulence has been determined, which is of great importance for the prevention of fungous diseases and poisonings of animals.

The scientific research in the area of the use of pastures and fodder production is aimed at the consolidation of the fodder base of livestock breeding. The composition of 50 types of pastures and more than 20 types of hay fields located in different geographical zones of the country has been studied, the amount of nutrients and mineral substances, amino acids and hydrocarbons in more than 300 plants has been determined, the dynamics of the digestibility and food value of plants by seasons of the year has been established. As a result the scientific basis of the solution of the problem of providing livestock with supplements, especially protein, during the winter-spring period has been elaborated; the capacity of various types of pastures has been determined, and the demand for pastures for one conventional head of livestock in the forest-steppe, step and Gobi zones by seasons of the year was also determined.



Comprehensive agrobiological measures are being elaborated on the increase of the productivity of hay fields and pastures by means of irrigation and the application of fertilizers on extremely exhausted natural pastures. It has been established that if 10-20 tons of organic fertilizers were applied to each hectare of exhausted pastures with a yield of 1.2-2 quintals/hectare, their productivity increases to 12-15 quintals/hectare, while with the application of nitrogen, phosphorus and potassium fertilizers it increases to 28 quintals/hectare. Here the proportion of the grass plants in the botanical composition of the grasses of improved pastures increases, the amount of digestible protein in the plants increased by 12-18 percent.

The production experiments conducted in 1976 at the Shaamar Farm on an area of 1,500 hectares of hay fields on the application of mineral fertilizers made it possible to obtain 35-50 quintals per hectare, while at the Buyant Farm on an area of 15 hectares--22 quintals. The yield of hay fields with the application of mineral fertilizers increased 3.7-fold.

It was established that three waterings during the season and the application of mineral fertilizers make it possible to obtain 30 quintals per hectare of hay field. On the basis of these experiments cultivated pastures and hay fields are being created at the mechanized dairy farms in the suburban zones of the country.

The experiments on the cultivation of various fodder crops made it possible to determine the most productive species and varieties of annual and perennial plants, to develop agrotechnology, to determine the schedules of watering and the application of fertilizers for the different natural and climatic zones of the country.

It was also established that the sowings of alfalfa, awnless brome grass, wheat grass, Siberian lyme grass and other perennial grasses on the irrigated lands of the Gobi zone and the western aymags with two cuttings make it possible to obtain 60-100 quintals of hay per hectare.

The sowings on the irrigated lands of the same zones of annual crops--Italian millet, sorghum, millet, Sudan grass and others--make it possible to obtain 47-86 quintals/hectare of good quality hay. The introduction of experimentally checked technologies of the procurement of fodders at farms having small irrigation systems yields an economic impact of several tens of millions of tugriks by means of the reduction of the expenditures on the transportation of fodders to the western and Gobi aymags.

Of great importance are the operations on the improvement of the technologies of the production of fodders on an industrial basis, on the increase of their food value and digestibility, on the reduction of the losses of nutrients in fodders and on the determination of local raw material resources for fodder production.

The technology of producing vitaminous meal from the green matter of oats, natural grasses, nettle, green cane, multiple-root common wild leek and pine needles has been developed, the food value and optimum periods of the storage of such meal have been established. On the basis of this the technical and economic substantiation for the creation of 41 shops for the production of vitaminous grass meal was drawn up.

The technology of the production of granulated fodders with the use of the moistening of the initial fodder mixture with hot water or steam is being extensively introduced. Formulas of milk substitutes for young animals, compounds of trace elements and polymineral supplements for livestock have been developed and are being introduced in production.

The scientific research in the area of farming and plant growing is aimed entirely at the implementation of the decisions of the 11th (1976) CC MPRP Plenum, which recognized it as necessary to increase the role and responsibility of scientific institutions and experimental stations in the development of farming, having focused their efforts on the solution of key problems on the increase of the standards of farming and the yield of fields.

There have been developed and are being introduced in production systems of farming for individual zones of the country; a system of protecting the soil against wind erosion; agricultural methods on the tilling of soils, irrigation and the application of fertilizers in crop rotations; the agricultural technology of the cultivation of many agricultural crops.

The studies showed the advantage of the three-field grain-fallow crop rotation, which is of great importance for protecting soils from wind erosion. A well-prepared fallow field, which has been plowed by the mouldboard method to a depth of 20-22 cm, after sowing wheat on it for the second year, as a rule, is free of weeds. Therefore in the third year on this field it is possible to sow wheat over the stubble (with the appropriate tilling of the soil).

Experiments have established that in the nonmouldboard plowing of soil with the application of fertilizers and the use of herbicides it is possible to obtain grain crops no smaller than in mouldboard plowing.

The performed research showed that in the central region of the country the use of swath harvesting of wheat at the stage of waxy ripeness and the thrashing of the swaths on the 5th to 7th day after the harvest sharply reduce the losses of grain. Here the moisture content of the grain is 17 percent, that is, is optimal. In the swath harvesting of wheat a height of cutting of 10-15 cm is recommended, since with a height of the cut of 20-30 cm the losses of grain increase to 20-45 percent.

It has also been established that the optimum doses of the application of fertilizers to spring wheat are 60 kg of N, 60 kg of  $P_2O_5$  and 60 kg of  $K_2O$  per hectare, which yields an increase of the harvest of wheat sown on

fallow land to 9.8 quintals, and for spring plowing to 5.9 quintals per hectare, and makes it possible to obtain a profit in the amount of 52-91 mungs per tugrik spent on the application of fertilizers.

A considerable portion of the scientific research in the area of farming and plant growing is aimed at the selection and regionalization of individual varieties of agricultural crops, at the development of the agricultural technology of the cultivation of potatoes, vegetables, berry and fruit crops, at the development of the technology of the breeding and keeping of bees.

As a result of the study of various forms of sea buckthorn in the forest-steppe and trans-Altay zones and in the region of the hollow of large lakes 34 forms were ascertained, which are differentiated by the yield, the size of the berries, the content of oil and carotene in them, the resistance to various diseases and pests.

The experiments on the raising of bees at the Shaamar and Batsumber scientific research stations showed that the central Russian and gray mountain Caucasian (Georgian) species acclimatize well under our conditions and do not decrease their productivity qualities. At present about 1,000 colonies of bees are being maintained at 14 agricultural associations, state farms and scientific institutions and on the average 13.5 kg of commercial honey a year are obtained from each colony.

The scientific research in the area of the mechanization and electrification of agriculture is aimed at the development and introduction of systems of machinery for livestock breeding and farming, methods of the efficient use of technical means in agriculture, as well as the repair and maintenance of tractors and agricultural machinery.

The research on the selection of the optimum composition, parameters and operating schedule of machine and tractor units determined that with the use at grain state farms of a tractor like the T-150 instead of the now widely used DT-75 tractor the labor productivity in farming will increase 1.8-fold, the demand for machine operating personnel will decrease by more than 1,700 people and the annual economic impact will be about 7 million tugriks.

The introduction of scientifically substantiated norms of the consumption of spare parts of combines and tractors at the Jargalant State Farm in the past two years made it possible to save 624,000 tugriks. In 1976 an accessory for the ZhVN-6 reaper for the formation of a double swath during the swath harvesting of grain crops was introduced at this state farm. With the use of this attachment the cutting of grains was carried out on 70 percent of the areas harvested by the swath method. This made it possible to ensure the complete utilization of the throughput of the combines during the gathering and thrashing of the swaths and to save on the average 13.75 tugriks of direct expenditures per hectare of harvested areas.

Standards have been elaborated for mechanized operations in farming and for the consumption of fuel and lubricants by zones of the country, which is of great importance for the further increase of productivity, the improvement of the organization and the remuneration of the labor of machine operators.

For the purpose of mechanizing labor-intensive processes in livestock breeding a device for the removal of compacted manure from pasture corrals, a manual self-propelled mower for the cutting of multiple-root common wild leeks, a disinfectant for livestock barns and other machines have been developed.

In the past six years scientific research institutions of agriculture have complete 59 jobs which are of great practical significance: 3 breeds and breed groups of livestock, 18 biologicals for the diagnosis, prevention and treatment of various animal diseases have been developed, 12 strains of agricultural crops have been bred, 288 instructions, recommendations and standards, which are aimed at the increase of the production of agricultural products, have been drawn up and so on.

Further Tasks of Agricultural Science. The main tasks of agricultural science are the elaboration of the most important, crucial problems of theoretical and practical importance, which are aimed at the acceleration of the development and the intensification of agriculture, the extensive introduction in production of the achievements of science and technology, the utmost consolidation of the ties of science and agricultural production.

In planning scientific research operations in the area of agriculture we are aiming all efforts and assets at the solution of the following tasks:

the elaboration of the main directions and forecasts of the scientific and technical policy of the development of agriculture, as well as a program of the introduction of the achievements of science, technology and advanced processing methods for the next 10-15 years;

the consolidation of the economy, the improvement of the organization, planning and economic stimulation of agricultural enterprises; the scientific substantiation of the optimum levels of cooperation among farms, the specialization and concentration of production, the creation of agro-industrial complexes;

the elaboration of the scientific substantiation of the conversion in the main farming regions to the technology of the production of the products of livestock breeding on an industrial basis; the development in these regions of fine-wooled and semifine-wooled sheep breeding and dairy cattle raising;

the intensification of theoretical research on the problems of the genetics, physiology, biochemistry and feeding of animals, the improvement and introduction of the methods of industrial crossbreeding in the development of

beef cattle raising by means of the use of heterosis; the improvement of existing and the development of new, more productive breeds of animals and fowl;

the development of a rational system of preventive veterinary, sanitary and animal health care measures and improved methods of the prevention and treatment of noncontagious diseases of agricultural animals, especially young animals; the development and introduction of effective methods of eradicating infectious and invasive diseases of agricultural animals, especially the curing of them of brucellosis and parasitic diseases;

the preparation of a system of the efficient use of pastures; the breeding of new heavy-producing strains and the development of reserves of seeds of fodder crops; the development of methods of enriching fodders with proteins, vitamins and trace elements; the improvement of the norms and allowances of feeding, which ensure a steady increase of the productivity of animals; the development of cultivated pastures and irrigated haying lands;

the efficient use of agricultural lands; the increase of the standard of farming; the development of an efficient technology of the cultivation of agricultural crops by zones of the country; the development of a system of the protection, the improvement of the fertility of the soil and the application of fertilizers to the soil; the improvement of the production of elite seeds and the provision of the farms of the country with strain seeds; the creation of windbreaks; the development of the technology of the cultivation of agricultural crops on irrigated lands;

the development of short-stemmed, lodge-resistant, drought-resistant, disease-resistant and early ripening strains of wheat, rye and heavy-producing strains of potatoes, cabbage, onions, currants and sea buckthorn, which are suitable for mechanized cultivation and harvesting;

the improvement of agricultural technology, chemical and biological methods of controlling diseases and pests of agricultural crops and weeds;

the development and selection of systems of machinery and technical means for the mechanization, electrification and automation of agricultural production; the improvement of the operation and maintenance of the machinery and tractor fleet, the increase of the quality of the remain of machinery and units; the introduction of the mechanization of livestock breeding for the purpose of the sharp increase of labor productivity in this sector; the improvement and introduction of standards for mechanized and repair work, the consumption of fuel and lubricants in agriculture;

the development of a technology of mechanized operations on the production of agricultural products on an industrial basis; the preparation and introduction of systems of the automation of control and methods of the use of technical means in the management of production.

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In order to solve these tasks it is important above all to improve considerably the planning and cooperation of scientific research operations, the methodological management and monitoring of their fulfillment, to consolidate the pilot experimental base of the scientific institutions of agriculture, to completely solve the question of the material and technical supply of scientific research.

The party and government are giving comprehensive assistance to scientific institutions. Measures are being taken on the complete staffing of scientific research institutions with scientific personnel, the improvement of their skills and the increase of their responsibility for the assigned matter, the utmost consolidation of the tie of science with production.

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## SPACE RESEARCH PROGRAM PARTICIPATION OUTLINED

Moscow PRAVDA in Russian 9 Mar 78 p 4

/Interview with Corresponding Member of the MPR Academy of Sciences B. Chadra, director of the Scientific Research Institute of Physics and Technology of the MPR Academy of Sciences, in Ulan Baatar, by A. Krivel':  
"Congratulations With All Our Heart"

/Text/ /Answer/ "We began to participate in the development of space," said B. Chadra, director of the Scientific Research Institute of Physics and Technology of the MPR Academy of Sciences and corresponding member of the Academy of Sciences of people's Mongolia, "back at the end of the 1950's. At the time we were monitoring the earth satellites launched in the USSR. We have continued this work to the present.

"We are monitoring from two stations: the Ulan Baatar and the Gobi. The task of the reserach is the update of the flight trajectory of satellites and the study of the state of the upper layers of the atmosphere. We are taking part in the experiments placed in the satellites of the Interkosmos series.

"The use of space technology for geodesic operations is of great importance for Mongolia. Specialists of the USSR, the GDR and other countries are participating in this type of research, while we are acting as the coordinators of the international program. Right now Mongolian scientists and specialist jointly with their Interkosmos friends are engaged in the analysis of the materials received as a result of a large-scale joint experiment conducted on the territory of the MPR in August of last year. We hope to create the method of a first-class state geodesic system. For the traditional method of performing geodesic operations is very expensive and requires great expenditures of time. But we have a vast territory. The new method is as timely as can be.

"We are also using space means for the study of the natural resources of the republic. We are developing this direction in science jointly with the institutes of geology, geography, biology and botany.

"Mongolian scientists have accepted with much gratitude the proposal of the Soviet Union on the inclusion in the crews of spacecraft and stations of citizens of the countries of the socialist community. Our candidate cosmonauts have been selected and are undergoing the appropriate training. Today we already see the fruits of this important understanding. V. Remek, a citizen of the CSSR, is flying in starry space along with Soviet cosmonauts Yu. Romanenko, G. Grechko and A. Gubarev. With all our heart we congratulate the Soviet and Czechoslovak brothers on the outstanding achievement."

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